

# Wireless Plug-and-Play Power Outlet with Consumption Monitoring

## R809A Data Sheet

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Wireless Network Based on LoRa Technology



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## Wireless Plug-and-Play Power Outlet with Consumption Monitoring

### 1. Introduction

R809A is a wireless plug-and-play power outlet with consumption monitoring for indoor use. It can remotely control the output switch and detect the output power. With the wireless SX1276 module of LoRa/FSK modulation communication, the device can be controlled remotely. R809A is used to measure the power consumption of electrical appliances and control wireless switches.

The specifications of the plug and socket supported by R809A are B, F, G, I.



R809AB: US type



R809AF: EURO type



R809AG: UK type



R809AI: AU type

### 2. Features

- LoRa/FSK modulation for long-distance wireless communication
- SX1276 wireless communication module
- Built-in memory for storing power (Active Power) consumption data
- LoRaWAN™ Class C compatible

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### 3. Electrical Specifications

Rated Operating Power Supply	100 to 240VAC, 50/60Hz
Typical Operating Current	15mA/220VAC/1W (max: 120Ma)
Typical Load Characteristics	<p>Resistive load: 16A/250VAC; P:4000VA</p> <p>Inductive load (max.): 8A/220VAC; P:1760VA (COSφ=0.4)</p> <p>Rated Load: EU type: 16A/250VAC</p> <p style="padding-left: 40px;">UK type: 13A/250VAC</p> <p style="padding-left: 40px;">AU type: 10A/250VAC</p> <p style="padding-left: 40px;">US type: 15A/125VAC</p> <p>Electric motor (max.): 1.5HP/240VAC</p> <p>White lamp/fluorescent lamp/gold halogen lamp: 3000W/220VAC</p> <p>LED lamp (max.): less than 400W (within 8 LED lamps)</p> <p>Note: The device's overload protection would automatically cut off the power in 2 seconds after detection.</p>
Relay Switch Lifetime	100,000 times
Current Measurement Range	100mA to 16A
Energy Measurement Error	< ±1%

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### 4. Frequency

Frequency Range	863MHz-928MHz, 470MHz-510MHz
Power Output	19dBm±1dBm (max.)
TX Power	US915 20dBm AS923 16dBm AU915 20dBm CN470 19.15dBm EU868 16dBm KR920 14dBm IN865 20dBm
Receiving Sensitivity	-136dBm (LoRa, Spreading Factor=12, Bit Rate=293bps) -121dBm (FSK, Frequency deviation=5kHz, Bit Rate=1.2kbps)
Antenna Type	Build-in antenna
Communication Range	10km (line of sight) Note: The actual range may vary due to the environment.
Data Rate	LoRa: 0.3kbps to 50kbps FSK: 1.2kbps to 300kbps
Modulation	LoRa/FSK (Note: One modulation method is required.)
Supportable LoRaWAN Band	EU863-870, US902-928, AU915-928, KR920-923, AS923-1, AS923-2, AS923-3, IN865-867, CN470-510 (Note: optional, to be configured before shipment)

### 5. Physical Properties

Dimensions	95mm * 58mm * 42.5mm (not including the plug)
Ambient Humidity Range	5 to 85%RH (No condensation)
Ambient Temperature Range	-10°C to 50°C
Storage Temperature Range	-40°C to 85°C